



United States
Department of
Agriculture

Forest
Service

Northeastern Area
State & Private
Forestry

180 Canfield Street
Morgantown, WV 26505-3101

File Code: 3410 (NA-08-01)
Date: February 29, 2008

Subject: 2007 Hemlock Woolly Adelgid Detection Survey Results

To: Leanne Marten, Forest Supervisor
Allegheny National Forest

Between May and October of this year, Tom Hebda of the Allegheny National Forest (ANF) conducted a hemlock woolly adelgid detection survey of 48 hemlock stands throughout the forest. We are happy to report that no hemlock woolly adelgid was detected. The accompanying maps and table provide information and the locations of the sampled stands.

The hemlock woolly adelgid, *Adelges tsugae* (HWA), was introduced into the Eastern United States from Asia in the early 1950s near Richmond, Virginia. The adelgid was present on exotic trees that a private collector planted in his arboretum. The distribution of the HWA remained localized for the next decade. Since the 1960s the population has spread throughout the Northeastern United States. In 2005, HWA was reported in Elk County (Benezette Township) approximately 25 miles from the Allegheny National Forest (for more information please visit: <http://www.dcnr.state.pa.us/forestry/leaflets/fpmnews-sep05.pdf> and <http://www.dcnr.state.pa.us/forestry/leaflets/fpmnews.htm>). The impact of HWA on eastern hemlock (*Tsuga canadensis*) is severe; significant tree mortality usually occurs within 4 to 7 years after infestation. This insect not only threatens the hemlock resource but the unique ecosystem it creates.

This sampling plan was created using ANF stand data. Only stands defined as "hemlock" were selected and a subset of those stands with road or trail access was surveyed.

The purpose of this survey was:

- To detect if HWA is present on the Allegheny National Forest.
- To provide a minimum detection threshold whereby HWA can be detected with 75 percent reliability in hemlock stands where at least 2 percent of the trees are infested.
- To make an efficient determination of the percentage of trees infested within a stand at the 0.25 precision level.

Even though HWA has not been detected on the forest, it is important that field-going personnel continually monitor for evidence of HWA and report this information to the Morgantown Field Office. As part of our continuing monitoring efforts for next year, we plan to visit sites that have



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the highest likelihood of becoming infested. These areas will include campgrounds, trailheads, and other highly visited areas.

The ANF should be planning for the arrival of the HWA. Forest Health Protection staff can assist the forest in the development of these plans. It is recommended that the ANF begin these discussions and layout a strategy for dealing with this exotic insect before it is detected.

I personally would also like to extend my appreciation to Tom for his valuable assistance with this survey. If you or any of your staff have questions or comments regarding this survey, please contact Richard Turcotte or Ann Steketee at (304) 285-1503.

Sincerely,

Robert Lueckel
Field Representative
Morgantown Field Office

Cc: District Ranger, Bradford RD
District Ranger, Marienville/Ridgeway RD
Bob White, Forest Silviculturist

RMT/AKS

Table 1. Allegheny National Forest hemlock stand survey information, May to September 2007.

Stand	Comp	District	Year Surveyed				Location
			2004	2005	2006	2007	
1	610	Mar	Y	Y	Y	N	Beaver
1	669	Mar	N	N	Y	Y	Loleta Rec Area
1	857	Mar	N	Y	N	N	SR948
1	884	Mar	N	N	Y	N	
2	605	Mar	Y	N	Y	N	SR3004; West Hickory topo
2	862	Mar	N	N	Y	N	Russel City topo
3	686	Mar	Y	N	Y	N	Blue Jay
4	811	Mar	N	Y	N	N	Snowmobile Connecter 17
4	886	Mar	N	N	N	Y	
5	703	Mar	N	Y	N	N	SR66
6	614	Mar	Y	N	Y	Y	Beaver
7	851	Mar	N	Y	N	N	Highland
7	914	Mar	N	N	N	Y	Little Drummer Trailhead
8	614	Mar	N	N	N	Y	Beaver
12	686	Mar	N	N	N	Y	Rock Spr Run
14	810	Mar	N	Y	N	N	Snowmobile Connecter 17
14	848	Mar	N	Y	N	N	Oil well
14	879	Mar	Y	Y	Y	N	Red Lick Run
15	610	Mar	Y	Y	Y	N	Beaver
15	697	Mar	Y	Y	Y	N	Snowmobile Connecter 14
17	652	Mar	Y	Y	N	N	Snowmobile Connecter 9
17	681	Mar	N	N	Y	Y	Kelly pines
17	866	Mar	N	N	N	Y	
17	877	Mar	N	N	Y	N	4 corners
19	863	Mar	N	N	Y	N	Timberline ATV
19	897	Mar	N	N	Y	N	
20	685	Mar	Y	Y	Y	N	Mville
20	832	Mar	Y	Y	N	N	Twin Lakes Hiking
20	860	Mar	N	N	Y	Y	Pigs ear
20	898	Mar	N	N	Y	Y	
22	686	Mar	Y	Y	Y	N	Mville
22	846	Mar	Y	Y	Y	N	SR66
23	681	Mar	N	N	N	Y	Kelly Pines
23	686	Mar	N	N	N	Y	Mville
23	832	Mar	Y	Y	N	N	Twin Lakes Hiking
24	686	Mar	Y	Y	Y	N	Mville
24	699	Mar	N	N	Y	Y	
24	870	Mar	N	Y	Y	Y	Red Mill Campground
25	846	Mar	N	Y	N	N	SR66
26	686	Mar	Y	Y	Y	N	Mville
27	824	Mar	Y	Y	Y	N	Bloody Run
28	681	Mar	Y	N	Y	N	Snowmobile Connector #14
28	862	Mar	N	N	Y	N	Russel City topo
29	898	Mar	N	N	N	Y	
32	845	Mar	Y	Y	N	Y	SR66
33	681	Mar	N	Y	Y	N	Kelly Pines
33	686	Mar	Y	N	N	N	MVille Connector
34	889	Mar	Y	Y	Y	N	Red Lick Run

35	686	Mar	N	N	N	Y	Rock Spr Run
36	825	Mar	N	N	N	Y	Bloody Run
36	889	Mar	Y	Y	Y	N	Red Lick Run
37	644	Mar	Y	Y	Y	N	Snowmobile Connector 7
38	843	Mar	N	N	Y	N	Coon creek
39	843	Mar	N	N	Y	N	Coon creek
42	843	Mar	N	N	Y	N	Coon creek
45	907	Mar	N	Y	N	N	ESP307
48	907	Mar	Y	Y	Y	N	ESP307
49	701	Mar	N	Y	N	N	Rappe Run
51	820	Mar	Y	Y	Y	N	SR8
53	674	Mar	N	Y	Y	N	Oil Wells
53	870	Mar	N	N	N	Y	
56	703	Mar	N	Y	N	N	SR66
56	870	Mar	N	N	N	Y	
59	909	Mar	Y	Y	N	N	Laurel Hill
61	649	Mar	N	Y	N	N	Snowmobile Connector 12
65	805	Mar	N	Y	N	N	Twin Lakes
69	908	Mar	Y	Y	Y	N	ESP307
85	906	Mar	Y	Y	N	Y	ESP309/Little Drummer Trailhead
87	700	Mar	N	Y	N	N	Rappe Run
87	848	Mar	N	Y	N	N	Oil well
88	700	Mar	N	Y	N	N	Rappe Run
90	906	Mar	N	Y	N	N	ESP309/Little Drummer Trailhead
110	882	Mar	N	N	N	Y	
1	222	Brad	Y	Y	Y	N	Sill/ SR 3005
1	301	Brad	N	N	N	Y	Henry Mills
1	307	Brad	Y	N	Y	N	Twin Lakes Hiking/NCST
1	327	Brad	Y	Y	N	N	Hickory Creek
1	334	Brad	Y	Y	N	Y	Hickory Creek
1	350	Brad	Y	Y	Y	Y	Beaver
2	206	Brad	Y	N	Y	N	Rocky Gap
2	265	Brad	N	N	N	Y	Twomile Run
2	278	Brad	Y	Y	Y	N	Ram's Horn
2	279	Brad	N	N	Y	Y	Hearts Content
2	287	Brad	N	N	Y	N	Hearts Content
2	327	Brad	Y	Y	N	N	Hickory Creek
2	353	Brad	Y	Y	N	N	N Country Scenic
2	444	Brad	N	Y	Y	N	SR321
2	476	Brad	N	Y	N	Y	SR321/ longhouse dis area
3	206	Brad	Y	Y	Y	N	Rocky Gap
3	327	Brad	Y	Y	N	N	Hickory Creek
3	445	Brad	Y	Y	Y	N	SR321
4	350	Brad	N	N	Y	N	Yellow Hammer
5	327	Brad	N	N	N	Y	Hickory Creek
5	352	Brad	N	N	N	Y	
6	243	Brad	N	N	N	Y	Little Arnot run
6	346	Brad	N	N	N	Y	Fools Knob
8	349	Brad	N	Y	N	N	Beaver
8	352	Brad	N	N	Y	N	East fork
8	431	Brad	Y	Y	Y	Y	Sugar Bay Dispersed Area
9	346	Brad	N	N	N	Y	Reno run

11	209	Brad	Y	N	Y	N	Alleghany Snowmobile Loop
11	278	Brad	N	N	Y	Y	Hearts Content
11	290	Brad	Y	Y	N	N	N Country Scenic
11	327	Brad	Y	Y	N	N	Hickory Creek
11	353	Brad	Y	Y	Y	N	N Country Scenic
11	426	Brad	N	N	Y	N	Stickney topo
12	283	Brad	N	Y	N	N	Island
12	327	Brad	N	N	Y	N	Hickory Creek
12	353	Brad	Y	Y	N	N	N Country Scenic
12	444	Brad	Y	Y	Y	N	SR321
13	223	Brad	Y	Y	Y	Y	All Snow Loop Warren topo
13	327	Brad	Y	Y	Y	N	Hickory Creek
13	349	Brad	N	N	Y	N	Beaver
14	302	Brad	Y	Y	Y	N	Henry Mills
14	328	Brad	N	Y	N	N	Access Point
14	462	Brad	N	Y	N	Y	SR59
15	206	Brad	N	N	Y	N	Rocky Gap
16	209	Brad	Y	N	N	N	Alleghany Snowmobile Loop
16	346	Brad	N	N	N	Y	Otter Creek
18	224	Brad	Y	Y	Y	Y	All Snow Loop
18	278	Brad	Y	Y	Y	N	Hearts Content
18	287	Brad	N	N	Y	Y	Hearts Content
19	278	Brad	N	N	Y	Y	Hearts Content
19	287	Brad	N	N	Y	Y	Hearts Content
19	310	Brad	Y	Y	Y	N	Cherry Run: Sheffield topo
20	281	Brad	Y	N	N	N	Island
21	426	Brad	Y	Y	Y	N	Allegheny Snowmobile Loop
21	478	Brad	Y	Y	Y	N	All snow loop
22	327	Brad	Y	N	Y	N	Hickory Creek Wilderness
23	301	Brad	Y	Y	Y	N	Barnes
23	327	Brad	Y	N	Y	N	Hickory Creek Wilderness
23	440	Brad	Y	Y	Y	N	All Snow Loop; Westline topo
27	302	Brad	Y	Y	Y	N	Henry Mills
28	258	Brad	N	N	N	Y	Fish Hatchery
30	354	Brad	Y	Y	Y	N	N Country Scenic: Kellettsville topo
31	209	Brad	Y	N	N	N	Alleghany Snowmobile Loop
31	490	Brad	Y	Y	N	N	Lake
32	310	Brad	Y	Y	Y	N	Cherry Run: Sheffield topo
33	205	Brad	Y	Y	N	N	Rocky Gap
33	279	Brad	N	N	Y	Y	Hearts Content
2	287	Brad	N	N	Y	N	Hearts Content
2	327	Brad	Y	Y	N	N	Hickory Creek
2	353	Brad	Y	Y	N	N	N Country Scenic
2	444	Brad	N	Y	Y	N	SR321
2	476	Brad	N	Y	N	Y	SR321/ longhouse dis area
3	206	Brad	Y	Y	Y	N	Rocky Gap
3	327	Brad	Y	Y	N	N	Hickory Creek
3	445	Brad	Y	Y	Y	N	SR321
4	350	Brad	N	N	Y	N	Yellow Hammer
5	327	Brad	N	N	N	Y	Hickory Creek
5	352	Brad	N	N	N	Y	

6	243	Brad	N	N	N	Y	Little Arnot run
6	346	Brad	N	N	N	Y	Fools Knob
8	349	Brad	N	Y	N	N	Beaver
8	352	Brad	N	N	Y	N	East fork
8	431	Brad	Y	Y	Y	Y	Sugar Bay Dispersed Area
9	346	Brad	N	N	N	Y	Reno run
11	209	Brad	Y	N	Y	N	Alleghany Snowmobile Loop
11	278	Brad	N	N	Y	Y	Hearts Content
11	290	Brad	Y	Y	N	N	N Country Scenic
11	327	Brad	Y	Y	N	N	Hickory Creek
11	353	Brad	Y	Y	Y	N	N Country Scenic
11	426	Brad	N	N	Y	N	Stickney topo
12	283	Brad	N	Y	N	N	Island
12	327	Brad	N	N	Y	N	Hickory Creek
12	353	Brad	Y	Y	N	N	N Country Scenic
12	444	Brad	Y	Y	Y	N	SR321
13	223	Brad	Y	Y	Y	Y	All Snow Loop Warren topo
13	327	Brad	Y	Y	Y	N	Hickory Creek
13	349	Brad	N	N	Y	N	Beaver
14	302	Brad	Y	Y	Y	N	Henry Mills
14	328	Brad	N	Y	N	N	Access Point
14	462	Brad	N	Y	N	Y	SR59
15	206	Brad	N	N	Y	N	Rocky Gap
16	209	Brad	Y	N	N	N	Alleghany Snowmobile Loop
16	346	Brad	N	N	N	Y	Otter Creek
18	224	Brad	Y	Y	Y	Y	All Snow Loop
18	278	Brad	Y	Y	Y	N	Hearts Content
18	287	Brad	N	N	Y	Y	Hearts Content
19	278	Brad	N	N	Y	Y	Hearts Content
19	287	Brad	N	N	Y	Y	Hearts Content
19	310	Brad	Y	Y	Y	N	Cherry Run: Sheffield topo
20	281	Brad	Y	N	N	N	Island
21	426	Brad	Y	Y	Y	N	Allegheny Snowmobile Loop
21	478	Brad	Y	Y	Y	N	All snow loop
22	327	Brad	Y	N	Y	N	Hickory Creek Wilderness
23	301	Brad	Y	Y	Y	N	Barnes
23	327	Brad	Y	N	Y	N	Hickory Creek Wilderness
23	440	Brad	Y	Y	Y	N	All Snow Loop; Westline topo
27	302	Brad	Y	Y	Y	N	Henry Mills
28	258	Brad	N	N	N	Y	Fish Hatchery
							N Country Scenic: Kellettsville topo
30	354	Brad	Y	Y	Y	N	
31	209	Brad	Y	N	N	N	Alleghany Snowmobile Loop
31	490	Brad	Y	Y	N	N	Lake
32	310	Brad	Y	Y	Y	N	Cherry Run: Sheffield topo
33	205	Brad	Y	Y	N	N	Rocky Gap
33	279	Brad	N	N	Y	Y	Hearts Content
36	229	Brad	Y	Y	Y	N	All Snow Loop
38	327	Brad	N	N	Y	N	Hickory Creek
38	437	Brad	N	Y	Y	N	SR321
38	442	Brad	N	N	N	Y	Pigeon Run
39	327	Brad	Y	Y	Y	N	Hickory Creek

39	353	Brad	N	N	Y	N	Kelletville topo
39	483	Brad	N	N	Y	N	Meade
40	327	Brad	Y	Y	N	N	Hickory Creek
40	444	Brad	Y	Y	Y	N	SR321: Westline topo
41	327	Brad	Y	N	N	N	Hickory Creek Wilderness
43	209	Brad	Y	Y	Y	N	All Snow Loop
44	209	Brad	Y	Y	Y	N	All Snow Loop
44	231	Brad	Y	Y	Y	N	SR206
44	327	Brad	Y	N	N	N	Hickory Creek Wilderness
45	440	Brad	Y	Y	Y	N	All Snow Loop; Westline Topo
46	209	Brad	Y	Y	N	N	All Snow Loop
47	230	Brad	Y	Y	Y	N	SR206
51	476	Brad	Y	Y	N	Y	SR321
52	327	Brad	Y	Y	N	N	Hickory Creek
55	317	Brad	N	N	Y	Y	Minister Creek
55	328	Brad	N	N	Y	N	Hickory Creek
63	454	Brad	Y	Y	Y	N	SR321
63	455	Brad	Y	Y	N	N	Oil Well